



CURRICULUM
for
INTERNATIONAL SEMESTER
“Defence and Security Technical Systems”

Duration	: 15 weeks
Period	: starting with the academic year 2019/2020
Study mode	: full-time
Participants	: international / Romanian undergraduate students
Certification	: graduation certificate

TEACHING OBJECTIVES AND COMPETENCIES

The **teaching objective** is to prepare the participants for the acquisition of professional and transversal competencies that allow them to develop projects in the field of technical defence and security systems in international, multidisciplinary and multicultural teams.

Professional competencies: analysis of the constructive-functional principles of technical systems; modeling and simulation of phenomena and processes specific to technical systems; designing the main components and/or manufacturing technologies for technical systems; testing, assessing and ensuring the quality of technical systems for defence and security; management of technical defence and security projects.

Transversal competencies: responsible execution of professional tasks based on documentation, logical reasoning, practical applicability, evaluation, self-evaluation and optimal decision; performing activities and employing specific teamwork roles on different responsibilities, as well as assigning tasks for subordinate levels based on communication, cooperation, mutual respect, and using the feedback to improve their own work and the spirit of initiative; professional communication in a multidisciplinary, multicultural and international context.

DISCIPLINES, COURSE AND SYLLABUS DESIGN AND ASSESSMENT METHODS

No.	DISCIPLINES	Didactic activities					Individual study	ECTS
		C	S	L	P	Total		
1.	Mathematics Applied to Engineering	10	10	-	-	20	30	2
2.	Programming Techniques for Engineering	10	-	10	-	20	30	2
3.	Basics of Electrotechnics	10	-	10	-	20	30	2
4.	Robotics and Automation	10	-	10	-	20	30	2
5.	Sensors, Acquisition and Data Processing Systems/ Aerospace and Geospatial Data	10	-	10	-	20	30	2
6.	Mechanics and Strength of Materials	10	-	10	-	20	30	2
7.	Fluid Mechanics and Aerodynamics	10	-	10	-	20	30	2
8.	Intercultural and Professional Communication	10	10	-	-	20	30	2
9.	Basics of Logistics	10	-	10	-	20	30	2
10.	Armament Systems	10	-	10	-	20	30	2
11.	Electronic Warfare and Cyber Security Elements	10	-	10	-	20	30	2
12.	Combat Training Simulation	10	-	10	-	20	30	2
13.	Scientific Project	-	84	-	40	124	26	6
14.	Romanian Language for International Students*	14	14	-	-	28	22	2
15.	Physical Education and Sports*	-	-	28	-	28	22	2
TOTAL		134	118	128	40	420	430	34

CALCULATION BASIS

Total calendar days	Non-working days and legal holidays	Total days of study	Total hours of study	COURSES		GRADUATION	
				hours	days	hours	ore
105	30	75	364/420*	70	364/420*	5	30

NOTE: *The maximum number of assigned hours, including facultative disciplines.

REMARKS

1. The International Semester “Defence and Security Technical Systems” is conducted in English;
2. The semester has a duration of 15 weeks, of which 14 weeks for teaching activities, and one week for scientific project defence;
3. The participants in the international semester are undergraduate students from international and national military academies/civilian universities. Between the institutions of origin and the Military Technical Academy “Ferdinand I” there must be an Erasmus + interinstitutional agreement or a bilateral agreement by which the institutions of origin assume the recognition and equivalence of academic achievements and ECTS credits;
4. Students from the Military Technical Academy “Ferdinand I” can participate in the International Semester, in which case the faculties of origin assume the recognition and the equivalence of academic achievements and ECTS credits;
5. The eligibility criteria for accepting Romanian and foreign students at the International Semester courses are as follows:
 - to be enrolled in a university degree program from abroad or from Romania;
 - to have an Erasmus + interinstitutional agreement or a bilateral agreement signed between the institution of origin and the Military Technical Academy “Ferdinand I”;
 - to prove that they have completed at least one year of study in a bachelor’s degree program;
 - to provide evidence of having at least a B2 English level;
6. The admission of candidates to fill vacancies for the international semester shall be done based on the overall average of the years of study completed;

NECLASIFICAT

7. The didactic activities take place at a rate of 26 hours per week; additionally maximum 4 hours for facultative disciplines (*Romanian Language for International Students și Physical Education and Sports*);
8. The disciplines 1÷12 are planned and carried out modularly. Students can chose all disciplines or only a part of these disciplines, based on an option sheet. If a student will chose to no follow one discipline, he will take part in the activity of scientific project elaboration when this discipline is planned;
9. The activities related to the scientific project are carried out in international teams of 4-6 students, the activity being supervised by the member of the teaching staff responsible for the project;
10. Upon graduation, the Military Technical Academy “Ferdinand I” issues a graduation certificate accompanied by the transcript of records;
11. The curriculum was validated by the Senate of the Military Technical Academy “Ferdinand I” in the meeting dated 30.09.2019.

COMMANDANT (RECTOR) OF MILITARY TECHNICAL ACADEMY „FERDINAND I”

Brigadier General Prof. Eng. PhD

Iulian-Constantin VIZITIU

VICE-RECTOR FOR EDUCATION

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Cristian-Emil MOLDOVEANU